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Dattagupta et al.

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[54] USE OF NON-HYBRIDIZABLE NUCLEIC ACIDS FOR THE DETECTION OF NUCLEIC ACID HYBRIDIZATION

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[58] Field of Search 436/508, 808, 501, 504; 435/6, 7; 935/76, 77, 78

[56] References Cited

U.S. PATENT DOCUMENTS

4,358,535	11/1982	Falkow et al.	435/6
4,395,486	7/1983	Wilson et al.	436/508
4,556,643	12/1985	Paau et al.	436/501
4,563,417	1/1986	Albarella et al.	435/6
4,582,789	4/1986	Sheidorn et al.	435/6

FOREIGN PATENT DOCUMENTS

4200	3/1984	Australia
7500	10/1984	Australia
40310	10/1985	Australia
0079139	5/1983	European Pat. Off.
0097373	1/1984	European Pat. Off.

2125964 3/1984 United Kingdom

OTHER PUBLICATIONS

Piette, et al., Proc. Natl. Acad. Sci., USA, vol. 80, pp. 5540-5544, Sep. (1983).

Weber, et al., The Operon, Reznikoff (ed.), Cold Spring Harbor Laboratory, 1980, pp. 155-175.

Salzman, et al., J. of Virology, Jun. 1979, vol. 30, No. 3, pp. 946-950.

Higuchi, et al., Proc. Natl. Acad. Sci., USA, vol. 73, No. 9, pp. 3146-3150, Sep. (1976).

Annual Review of Biophysics and Bioengineering, vol. 10, 1981, "The Interaction of Intercalating Drugs with Nucleic Acids", Helen M. Berman and Peter R. Young, pp. 87-114.

Accounts of Chemical Research, vol. 11, 1978, "Platinum Complexes: Probes of Polynucleotide Structure and Antitumor Drugs", Stephen J. Lippard, pp. 211-217.

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[57] ABSTRACT

A detection probe comprising a hybridizable single stranded portion of nucleic acid connected with a non-hybridizable, single or double stranded nucleic acid portion, the non-hybridizable portion preferably including a recognition site for a particular protein.

51 Claims, 1 Drawing Figure

